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09/533,148	03/23/2000	Eddie Huey Chiun Lin	99-313	1189

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EXAMINER	
BARQADLE, YASIN M	
ART UNIT	**PAPER NUMBER**
2153	16

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/533,148	Applicant(s) LIN, EDDIE HUEY CHIUN
	Examiner Yasin M Barqadle	Art Unit 2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) *26-31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Argument

1. In view of the Appeal Brief filed on May 21, 2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Response to Amendment

2. The amendment filed on May 21, 2004 has been fully considered but are moot in view of the new ground(s) of rejection.

3. Claims 1-25 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldmann US. Pub No. (20020021675 A1) in view of Kracht USPN (6377987).

As per claim 1 and 14, Feldmann teaches a method for analyzing a data network having a plurality of routers comprising (abstract):

accessing at least one of static routing information and route summarization information from router [relevant information is extracted from a collection of router configuration files and where each section of the configuration files is read and parsed. The information that is extracted and parsed as shown in the figures 4 and 5 include network-wide view of topology and configuration information such as routing protocols (static routes, RIP, BGP and OSPF) in which forwarding routing tables are

constructed [Figs. 4 and 5; page 1, paragraphs 0010 and page 3, Paragraphs 0030-36; see also paragraph 024];

determining if particular network prefix is included in the accessed information [page 2, paragraphs 0024-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-0051];

an identity included in the accessed information corresponding to the network prefix [an example of device identity could be router name, router type, router location, border area router, edge linking router, router with next-hop interface, backbone linking router, router where the packet is received and router where the packet is to exit. See page 2, paragraphs 0022-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-0051. See also page 4, paragraph 0039 and Figs. 4 and 5]; and

analyzing the data network using the determined identity [Fig. 4 and page 3, Paragraphs 0028-36; see also page 4, paragraph 0039].

Although Feldmann shows substantial features of the claimed invention, he does not explicitly show determining an identity of a network device.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Feldmann, as evidenced by Kracht USPN. (6377987).

In analogous art, Kracht whose invention is about a mechanism for determining a set of network addresses for identifying devices within a network, disclose a system for determining an identity of a network device based on set of network address associated with the network [col. 7, lines 28-35 and col. 16, lines 13-17. Also, see the abstract]. Giving the teaching of Kracht, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Feldmann by employing the system of Kracht so that a network administrator can accurately identify a particular type of devices that are included in a network based on Layer 3 information and to identify where the physical link of a device to the Internet exists with a network topology [col. 3, lines 36-42 and col. 13, line 60 to col. 14, line 16].

As per claim 2 and 15,Feldmann teach a method wherein the accessing includes:

accessing at least one of a static routing table and open shortest path first route summarization table [Figs. 2 & 4; page 3, Paragraphs 0030-36].

As per claim 3 and 16, Feldmann teach a method wherein determining includes:

determining router information, interface information, and association information for the networks prefix [Fig. 1, page 2, Paragraphs 0024-36].

As per claim 4 and 17, Feldmann teach the method wherein analyzing includes:

analyzing traffic of data network [page 2, Paragraphs 0022-0028].

As per claim 5 and 18, Feldmann teach the method wherein analyzing includes:

modeling the data network [page 2, Paragraphs 0022-0024].

As per claim 6 and 19, Feldmann teach the method wherein the determining includes:

determining an identity of an exit or entry router in the data network [page 2, paragraphs 0024 to page 3, Paragraphs 0031. See also page 4, paragraph 0039].

As per claim 7, this is a means claim with similar limitations as claims 1 and 14 addressed above. Therefore, it is rejected with the same rationale.

As per claim 8, Feldmann teach a system for analyzing a data network, said system comprising:

a memory configured to store information representing static routing information and route summarization information [the configuration files for all routers in the network are read through to create a table storing every

configuration line. figures 4 and 5 include network-wide view of topology and configuration information such as routing protocols (static routes, RIP, BGP and OSPF) in which forwarding routing tables are constructed [Figs. 2 and 4 and page 2, paragraphs 0024 and page 7, paragraph 0066]; and

a processor (fig. 2, 210) configured to:

access at least one of the static routing information and the route summarization information [relevant information is extracted from a collection of router configuration files and where each section of the configuration files is read and parsed. The information that is extracted and parsed as shown in the figures 4 and 5 include network-wide view of topology and configuration information such as routing protocols (static routes, RIP, BGP and OSPF) in which forwarding routing tables are constructed [Figs. 4 and 5; page 1, paragraphs 0010 and page 3, Paragraphs 0030-36; see also paragraphs 024];];

determining if a particular network prefix is included in the accessed information [page 2, paragraphs 0024-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-0051];

an identity included in the accessed information corresponding to the network prefix [an example of device identity could be router name, router type, router location, border area router, edge linking router, router with next-

hop interface, backbone linking router, router where the packet is received and router where the packet is to exit. See page 2, paragraphs 0022-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-51];]; and

analyze the data network using the determined identity [Fig.4 and page 3, Paragraphs 0031-36].

As for the limitation of determining an identity of a network device see the rejection made on claims 1 and 14.

As per claim 9, Feldmann teach a system wherein, when accessing, the processor is configured to:

accessing at least one of a static routing table and open shortest path first route summarization table [Figs. 2 & 4; page 3, Paragraphs 0030-36].

As per claim 10, Feldmann teach a system wherein, when determining, the processor is configured to:

determining router information, interface information, and association information for the networks prefix [Fig. 1, page 2, Paragraphs 0024-31].

As per claim 11, Feldmann teach a system wherein, when analyzing, the processor is configured to:

analyze traffic of the data network using the determined identity [page 2, Paragraphs 0022-0024].

As per claim 12, Feldmann teach a system wherein, when analyzing, the processor is configured to:

model the data network using the determined identity [page 2, Paragraphs 0022].

As per claim 13, Feldmann teach a system wherein, when determining, the processor is configured to:

determine an identity of an exit or entry router in the data network [page 2, paragraphs 0024 to page 3, Paragraphs 0031. See also page 4, paragraph 0039].

As per claim 20, Feldmann teach a method for determining an identity of a network device, the network device being associated with a network prefix, the method comprising:

accessing one or more of a border gateway protocol peering table, a static route table, an open shortest path first route summarization table, and a network topology table [Fig. 2 and 4-5, page 1, paragraphs 0010 and page 3, Paragraphs 0031-36];

determining whether one or more of the accessed tables contains the network prefix [Fig. 4 and page 3, Paragraphs 0022-36]; and

using the accessed tables when at least one of the accessed tables is determined to contain the network prefix [an example of device identity could be router name, router type, router location, border area router, edge linking

router, router with next-hop interface, backbone linking router, router where the packet is received and router where the packet is to exit. See page 2, paragraphs 0022-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-0051. See also page 4, paragraph 0039 and Figs. 4 and 5].
As for the limitation of determining an identity of a network device see the rejection made on claims 1 and 14.

As per claim 21, Feldmann teach a method wherein the determining an identity includes:

determining router information, interface information, and association information [Fig. 1, page 2, Paragraphs 0024-31. See also page 4, paragraph 0039 and page 5, paragraphs 0048-0051].

As per claim 22, Feldmann teach a system for determining an identity of a network device, the network device being associated with a network prefix, the system comprising:

a memory configured to store one or more of a border gateway protocol peering table, a static route table, an open shortest path first route summarization table, and a network topology table [relevant information is extracted from a collection of router configuration files in order to populate the data model. The information that is extracted and parsed as shown in figure 5 include network-wide view of topology and configuration information such as routing

protocols (static routes, RIP, BGP and OSPF) in which forwarding table is constructed [Fig. 2, page 2, paragraphs 0024 and fig. 4, data model 450. See also paragraphs 0066]; and

a processor (Fig. 2, 210) configured to:

access, from the memory, one or more of the border gateway protocol peering table, the static route table, the open shortest path first route summarization table, and the network topology table [Figs. 4 and 5; page 1, paragraphs 0010 and page 3, Paragraphs 0031-34];

determine whether one of the accessed tables contains the network prefix [page 1, paragraphs 0010 and page 3, Paragraphs 0031-36]; and

using the accessed tables when at least one of the accessed tables is determined to contain the network prefix [an example of device identity could be router name, router type, router location, border area router, edge linking router, router with next-hop interface, backbone linking router, router where the packet is received and router where the packet is to exit. See page 2, paragraphs 0022-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-0051. See also page 4, paragraph 0039 and Figs. 4 and 5].

As for the limitation of determining an identity of a network device see the rejection made on claims 1 and 14.

As per claim 23, Feldmann teach a system wherein, when determining an identity, the processor is configured to:

determine router information, interface information, and association information [Fig. 1, page 2, Paragraphs 0022-34].

As per claim 24, Feldmann teach a computer-readable medium containing instructions for controlling at least one processor to perform a method that determines an identity of a network device, the network device being associated with a network prefix, the method comprising:

accessing, from a router, one or more of a border gateway protocol peering table, a static route table, an open shortest path first route summarization table, and a network topology table [Figs. 4 and 5; page 1, paragraphs 0010 and page 2, paragraphs 0022 to page 3, Paragraphs 0031-36];

using the accessed tables when at least one of the accessed tables is determined to contain the network prefix [an example of device identity could be router name, router type, router location, border area router, edge linking router, router with next-hop interface, backbone linking router, router where the packet is received and router where the packet is to exit. See page 2, paragraphs 0022-0028 and page 3, Paragraphs 0030-36 and page 5, paragraphs 0048-0051. See also page 4, paragraph 0039 and Figs. 4 and 5].

As for the limitation of determining an identity of a network device see the rejection made on claims 1 and 14. As per claim 25, Feldmann teach the computer-readable medium of claim 24 wherein the determining an identity includes:

determining router information, interface information, and association information [Fig. 1, page 2, Paragraphs 0024-36].

Conclusion

1. The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 703-305-5971. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 703-305-9717. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Yasin Barqadle

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